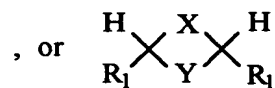
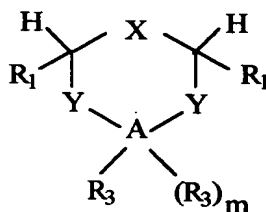
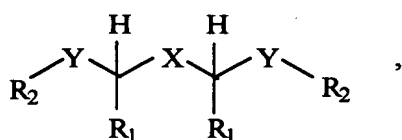
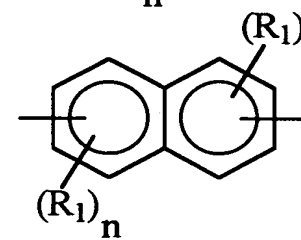
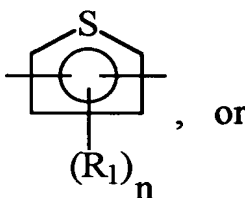
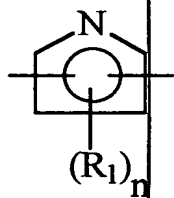
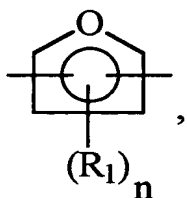
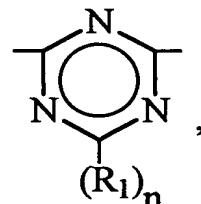
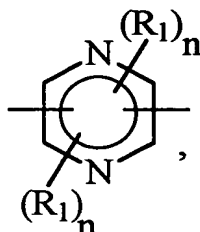
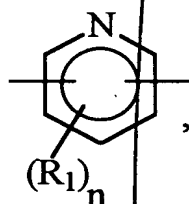
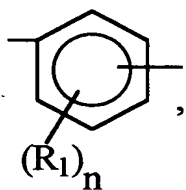


I CLAIM:

1. A polymer which comprises polyvinyl chloride, polyvinylidene chloride, polycarbonate, polyurethane, polyethylene, polypropylene, polyamide, polyimide, polyester, or polyvinyl acetate containing about 0.005 to about 10 phr of a stabilizer having the formula:



where A is C, P, Sn, Si, or B, X is $-\text{R}_1\text{C}=\text{CR}_1-$, $-\text{C}\equiv\text{C}-$,

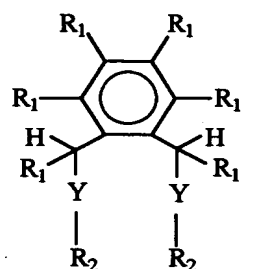
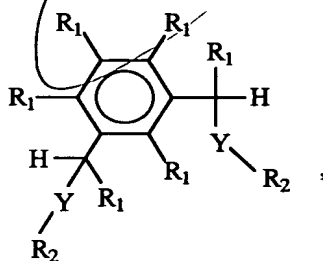
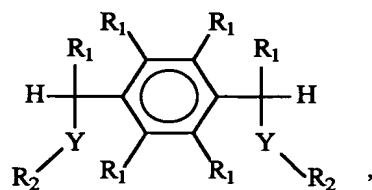
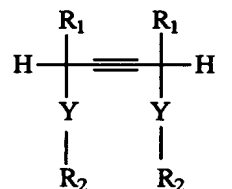
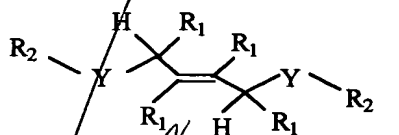
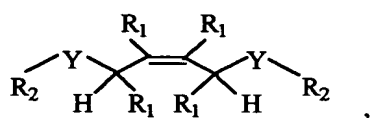


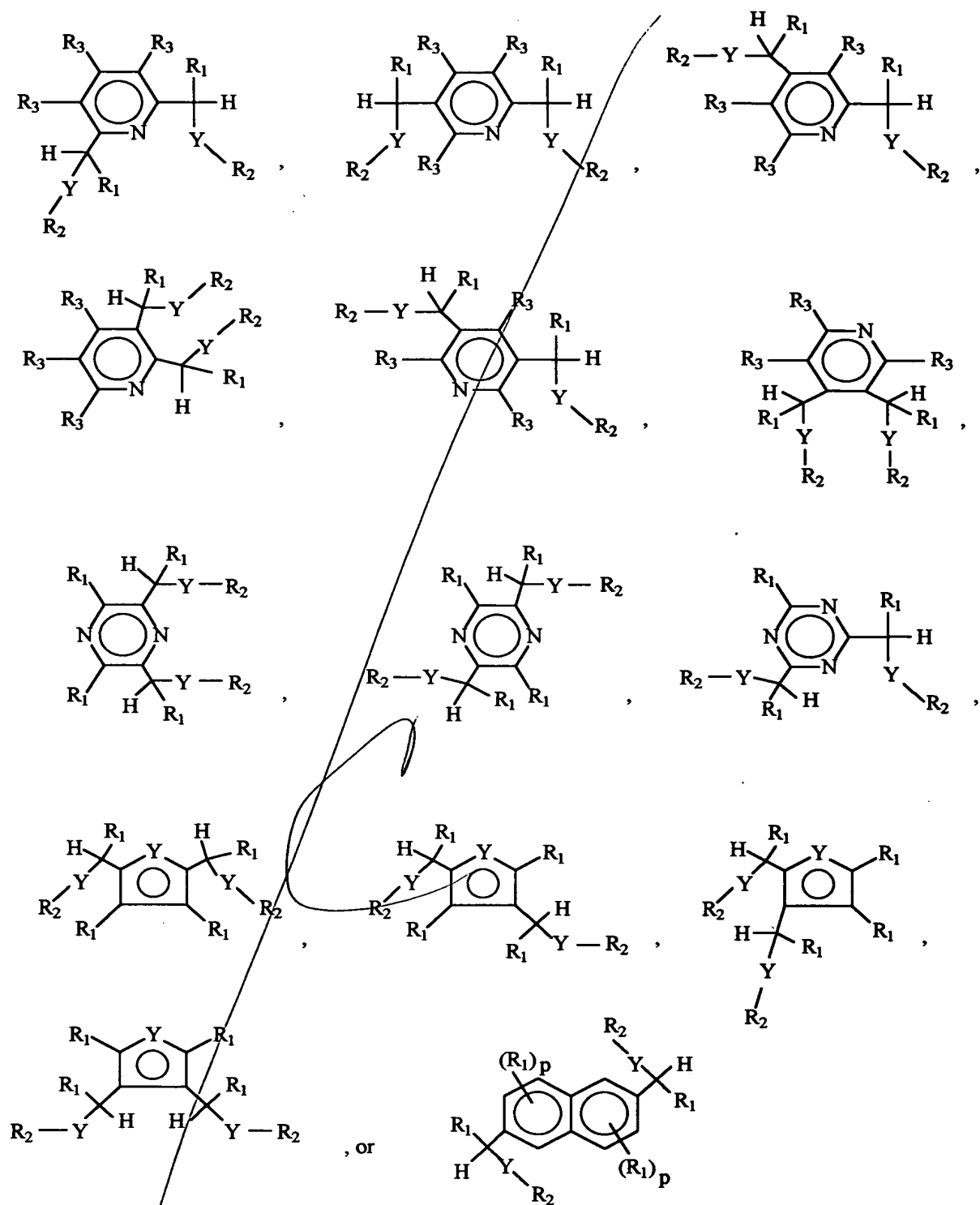
each Y is independently selected from O and S; each R is independently selected from hydrogen, alkyl from C_1 to C_{20} , aryl from C_6 to C_{20} , alkaryl from C_7 to C_{20} , and aralkyl from C_7 to C_{20} ; each R_1 is independently selected from R, OR, RCO, ROCO, ROCO_2 , $\text{P}(\text{R})_2$, $\text{P}(\text{OR})_2$, $\text{PR}(\text{OR})$, $\text{N}(\text{R})_2$, $(\text{R})_2\text{NCO}$, $(\text{R})_2\text{NCO}_2$, SR, and halogen; each

10 R_2 is independently selected from R, RCO, ROCO, $P(OR)_2$, $Sn(R)_p(OR)_{3-p}$,
 11 $Sn(R)_p(OCOR)_{3-p}$, $Si(R)_p(OR)_{3-p}$, and $B(R)_p(OR)_{2-p}$, and two R_1 groups, two R_2 groups,
 12 or an R_1 group and an R_2 group can be bridged together to form a ring, except that
 13 when two Y's are O and X is $-R_1C=CR_1-$ at least one R_2 is not hydrogen; each R_3 is
 14 independently selected from R, RCO, ROCO, $ROCO_2$, OR, SR, $N(R)_2$, $OP(R)_2$, and
 15 $OP(OR)_2$; m is 0 when A is P or B and is 1 when A is Sn, Si, or C; n is 0 to 4,
 16 depending on the number of available sites; and p is 0 to 3 for the tin stabilizers and
 17 0 to 2 for the boron stabilizers.

2. A polymer according to Claim 1 wherein said polymer is polyvinyl chloride.

3. A polymer according to Claim 1 wherein said stabilizer has the formula

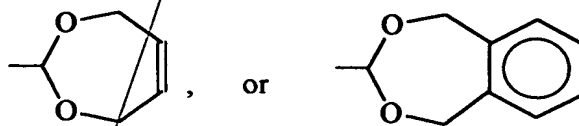




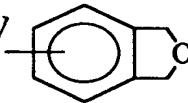
5. A polymer according to Claim 1 that is has been made into an article that has been sterilized with gamma radiation.
6. A polymer according to Claim 1 wherein said stabilizer is cis-4-benzyloxy-2-buten-1-ol.
7. A polymer according to Claim 1 wherein said stabilizer is cis-1,4-dibenzyloxy-2-butene.
8. A polymer according to Claim 1 wherein said stabilizer is a 4,7-dihydro-1,3-dioxepin.
9. A polymer according to Claim 1 wherein said stabilizer is a phthalan.
10. A polymer according to Claim 1 wherein Y is O.
11. A polymer according to Claim 1 wherein X is $-R_1C=CR_1$.
12. A polymer according to Claim 1 wherein A is C.
13. A polymer according to Claim 12 wherein X is $-HC=CH-$; R is benzyl; R_1 is H; R_2 is R; R_3 is R; said two R_1 groups that can be bridged together to form a ring

arylene-CO- from C_6 to C_{20} , -CO-(aryl)alkylene-CO- from C_7 to C_{20} , -CO-(alkyl)arylene-CO- from C_7 to C_{20} , $Si(R)_2$, $SiR(OR)$, $Si(OR)_2$, $P(OR)$, $B(OR)$, $Sn(R)_2$, $SnR(OR)$, or $SnR(O-CO-R)$; and q is 1 to 1000.

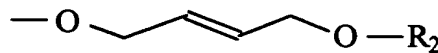
16. A polymer according to Claim 15 wherein said stabilizer has the pendant groups



17. A polymer according to Claim 15 wherein said stabilizer has the pendant group

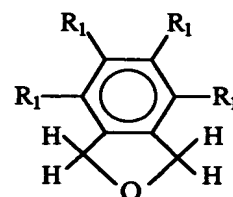
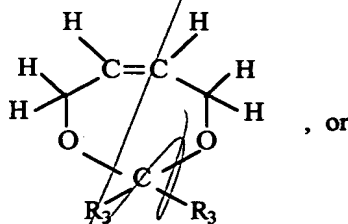
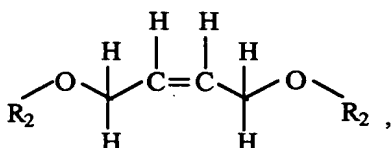
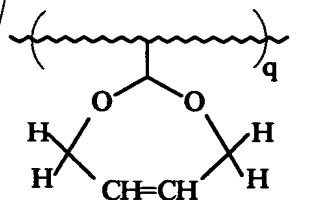
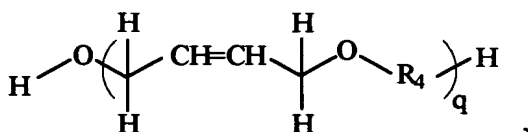


18. A polymer according to Claim 15 wherein said stabilizer has the pendant group



19. A polymer according to Claim 15 that has been made into an article and sterilized with gamma radiation.

20. Polyvinyl chloride, polyurethane, polyethylene, polypropylene, or polycarbonate containing about 0.2 to about 6 phr of a stabilizer having the formula:

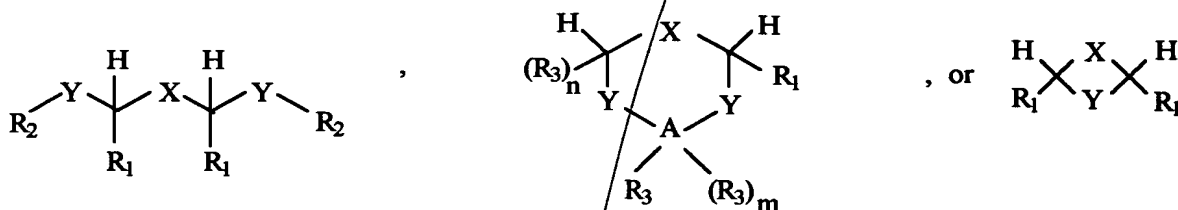


where R_1 is hydrogen; one R_2 is R and the other R_2 is R or hydrogen; R_3 is R; R_4 is alkylene from C_1 to C_8 , (aryl)alkylene from C_7 to C_8 , or $-\text{CO}-$ (aryl)alkylene- $\text{CO}-$ from C_7 to C_8 ; R is benzyl; and q is 1 to 5.

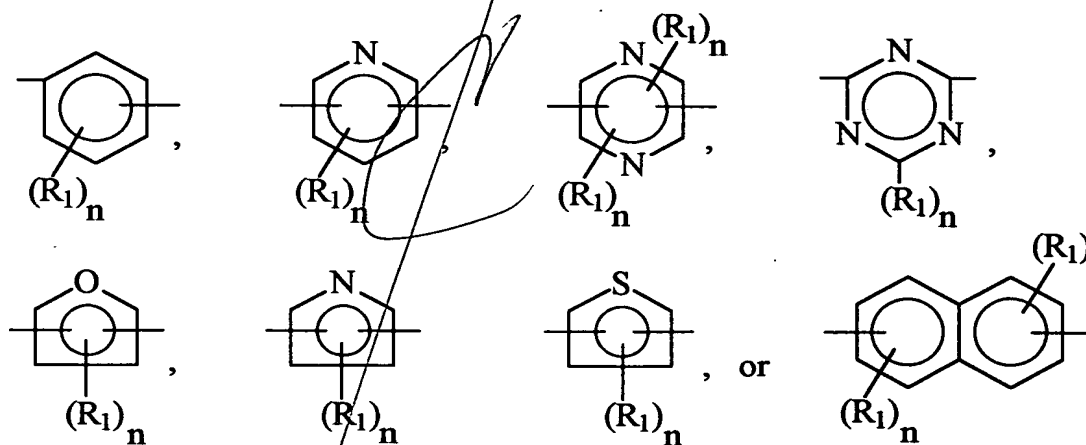
21. Polyvinyl chloride according to Claim 20 that has been made into an article and said article has been sterilized with gamma radiation.

22. A method of making a sterilized polymeric article comprising

(A) preparing a polymer which comprises polyvinyl chloride, polyvinylidene chloride, polycarbonate, polyethylene, polypropylene, polyamide, polyimide, polyether, polyester, or polyvinyl acetate that contains about 0.005 to about 10 phr of a stabilizer having the formula:



where A is C, P, Sn, Si, or B, X is $-\text{R}_1\text{C}=\text{CR}_1-$, $-\text{C}\equiv\text{C}-$,



each Y is independently selected from O and S; each R is independently selected from hydrogen, alkyl from C_1 to C_{20} , aryl from C_6 to C_{20} , alkaryl from C_7 to C_{20} , and aralkyl from C_7 to C_{20} ; each R_1 is independently selected from R, OR, RCO, ROCO, ROCO_2 , $\text{P}(\text{R})_2$,

11 P(OR)₂, PR(OR), N(R)₂, (R)₂NCO, (R)₂NCO₂, SR, and halogen; each
12 R₂ is independently selected from R, RCO, ROCO, P(OR)₂,
13 Sn(R)_p(OR)_{3-p}, Sn(R)_p(OCOR)_{3-p}, Si(R)_p(OR)_{3-p}, and B(R)_p(OR)_{2-p}, and
14 two R₁ groups, two R₂ groups, or an R₁ group and an R₂ group can be
15 bridged together to form a ring, except that when two Y's are O and X
16 is -R₁C=CR₁- at least one R₂ is not hydrogen; each R₃ is independently
17 selected from R, RCO, ROCO, ROCO₂, OR, SR, N(R)₂, OP(R)₂, and
18 OP(OR)₂; m is 0 when A is P or B and is 1 when A is Sn, Si, or C; n is
19 0 to 4, depending on the number of available sites; and p is 0 to 3 for
20 the tin stabilizers and 0 to 2 for the boron stabilizers;

- (B) making an article from said polymer; and
(C) exposing said article to gamma radiation.

23. A polymer according to Claim 22 wherein said stabilizer is a polyether.

24. A polymer according to Claim 22 wherein said stabilizer is a polyester.

Add
C2